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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,417	07/18/2003	Hajime Motoyama	03500.017428.	2800
5514	7590	04/11/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			PHAM, HAI CHI	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	
			2861	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,417

Applicant(s)

MOTOYAMA, HAJIME

Examiner

Hai C. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claim 5 is withdrawn in view of the newly rejection basis under 35 U.S.C. 112, second paragraph, as well as in view of the newly discovered reference to Okuwaki et al. (U.S. 6,798,820). Rejections based on the newly cited reference follow.

Drawings

2. **Figures 1-5** should be designated by a legend such as --PRIOR ART-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the disclosure fails to indicate the subject matter being claimed in claim 3, namely, "lenses differing in refractive index from each other depending on wavelength" such that it is not clear whether the

collimator lens 200 and the f- θ lens 210 have different diffractive index with respect to the wavelengths or lenses of the same functions (either collimator lens 200 or f- θ lens 210) are being compared with regard to the refractive index.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 3 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3:

- The following limitation “lenses differing in refractive index *from each other* depending on wavelength” appears to be ambiguous in that it is not known whether a plurality of lenses of the same functions and/or of different functions are being claimed to have different refractive indexes from each other depending on wavelength [a hint of comparison being introduced by the recitation of “from each other”] or just “lenses” whose characteristic would have difference in refractive index depending on wavelength.

Claim 5:

- The following limitation “a rotating mechanism for rotating the semiconductor chip with substantially the centers of the first laser source and the second laser source as the center of rotation” appears to be misleading in that the center of

rotation is being shown as an intermediate point between the two light-emitting points of the semiconductor chip (Figs. 9A-9C).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujita et al. (U.S. 6,437,816).

Fujita et al. discloses a laser exposing apparatus having a first laser source (e.g., semiconductor laser 103) emitting a first laser beam (113), a second laser source (gas laser 101) emitting a second laser beam (105) shorter in wavelength than the first laser beam (the gas laser 101 emitting green light whose wavelength is shorter than the red

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light emitted by the semiconductor laser 103) (Fig. 2), optical means image-forming lenses 110) for directing the first and second laser beams to a photosensitive member (photosensitive drum 111), and adjusting means (delay correction optical system) for adjustment such that the optical path length of the second laser beam to the photosensitive member becomes longer than that of the first laser beam (Fig. 4).

With regard to claim 3, it is well known in the art that optical lenses usually have refractive index, which naturally varies in accordance with the wavelengths (please refer to Takahashi et al. (Pub. No. U.S. 2001/0050933) at paragraph [0031]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. in view of Takahashi et al. (Pub. No. U.S. 2001/0050933).

Fujita et al. discloses all the basic limitations of the claimed invention except for the first and second laser sources being provided in a semiconductor chip.

Regardless Takahashi et al. discloses a first light-emitting point (A1) emitting a first laser beam of the wavelength of 650 nm and a second light-emitting point (A2) emitting a second laser beam of a longer wavelength of 780 nm, both being disposed

on a semiconductor chip such that the two laser beams are focused on the same surface of the optical medium. Takahashi et al. also teaches the optical system such as the collimator lens (14) being known as having the refractive index dependent of the wavelength (paragraph [0031]).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the laser sources on the same semiconductor chip in the device of Fujita et al. as taught by Takahashi et al. The motivation for doing so would have been to provide a more compact exposure head.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. in view of Okuwaki et al. (U.S. 6,798,820).

Fujita et al. discloses all the basic limitations of the claimed invention except for the adjusting means having a rotating mechanism.

Okuwaki et al. discloses a multi-beam laser diode (5) having a plurality of light-emitting points (7a-7d) disposed in a straight line on the semiconductor substrate and being rotated about the optical axis such that the relative horizontal scanning positions are aligned and the pitch of the scanning lines is adjusted.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the rotating mechanism as taught by Okuwaki et al. in the device of Fujita et al. the motivation for doing so would have been to align the start positions of the horizontal scanning lines as well as to adjust the pitch of the scanning lines.

Response to Arguments

11. Applicant's arguments with respect to claims 1-3 and 5 have been considered but are moot in view of the new grounds of rejection presented in this Office action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

April 7, 2005